Letter of Transmittal

Kennedy/Jenks Engineers

657 Howard Street
San Francisco, California 94105
415-362-6065

To: Regional Water Quality Control Board
Los Angeles Region
107 S. Broadway, Room 4027
Los Angeles, CA 90012

Date: 12/11/84 Job No.: 4101

Attention: Mr. Joshua Workman

Subject: Pacific Airmotive
Site Assessment

We are sending you:

☒ Attached or ☐ Under separate cover via _____

the following items:

☐ Plans ☐ Prints ☐ Specifications ☐ Samples ☐ Shop drawings

☐ Copy of letter ☐ Change order ☒ as listed below

Copies	Date	No.	Description
1	12/11/84		Phase I Preliminary Contamination Assessment Report Pacific Airmotive Corporation, Burbank, California

These are transmitted as checked below:

☒ For information and coordination ☐ For review and comment ☐ Resubmit _____ copies for review

☐ For approval ☐ Returned after loan to us ☐ Submit _____ copies for distribution

☐ As requested ☐ _____ ☐ Return _____ corrected prints

Remarks:

Copies to: Mr. Christopher M. Andrews
Airwork Corporation

If enclosures are not as noted, kindly notify us at once.

Kennedy/Jenks Engineers

By: Thomas W. Kalinowski
Thomas W. Kalinowski, Sc.D.
Project Manager

G-5
(1/80)

Kennedy/Jenks Engineers

657 Howard Street
San Francisco, California 94105
415-362-6065

11 December 1984

Mr. Christopher M. Andrews
Manager - Engineering Quality
Control & Facilities
Airwork Corporation
Millville, NJ 08332

Subject: Phase I Preliminary Contamination Assessment Report, Pacific Airmotive Corporation, Burbank, California (K/J 4101)

Dear Mr. Andrews:

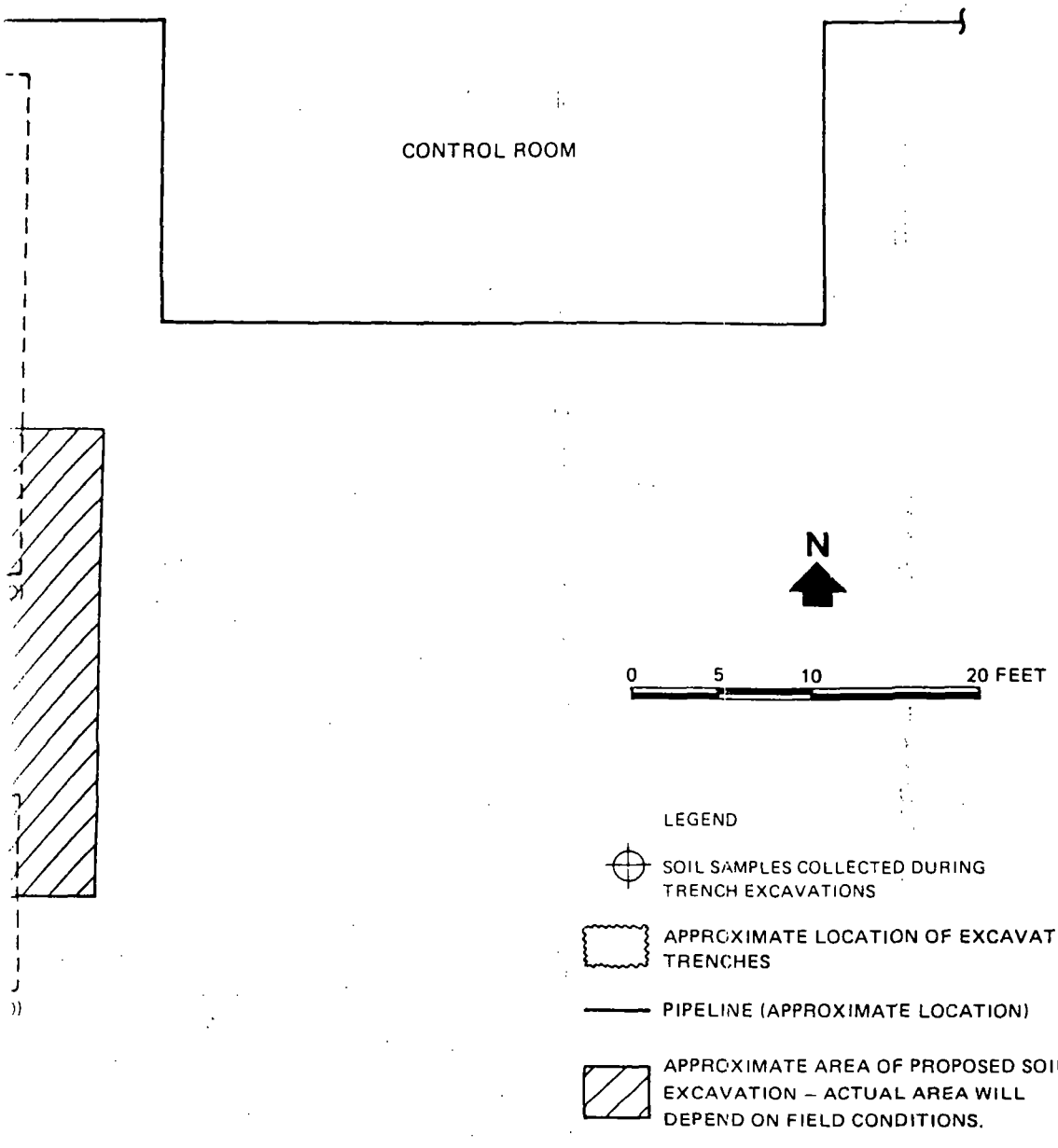
Pursuant to our Agreement dated 5 November 1984, Kennedy/Jenks Engineers conducted a soil sampling program on 19 and 20 November 1984 at the Pacific Airmotive Corporation (PAC) Burbank facility. The scope of work for the preliminary site assessment, Attachment A of our Agreement dated 5 November 1984, has been previously submitted to and accepted by the Los Angeles Regional Water Quality Control Board (RWQCB). This preliminary assessment confirmed that a leakage of some quantity of jet fuel has occurred at (PAC).

PHASE I PRELIMINARY CONTAMINATION ASSESSMENT

During this preliminary contamination assessment, trenches were excavated with a backhoe near a fuel pump station supplying fuel to Test Cells No. 1 through No. 4. Samples of excavated soil were collected for an organic vapor field survey and for subsequent laboratory analysis. Soil sample locations are shown on Figure 1.

Field Procedures

Soil samples were screened in the field with an organic vapor analyzer (Foxboro Model OVA-128) to indicate the presence of jet fuel. The screening was performed by placing the samples in glass jars and analyzing headspace for the presence of organic vapors. This procedure was followed for soil samples collected 1) at about three-foot depth intervals in the trench alongside the pump station, and 2) from material excavated along known pipelines.



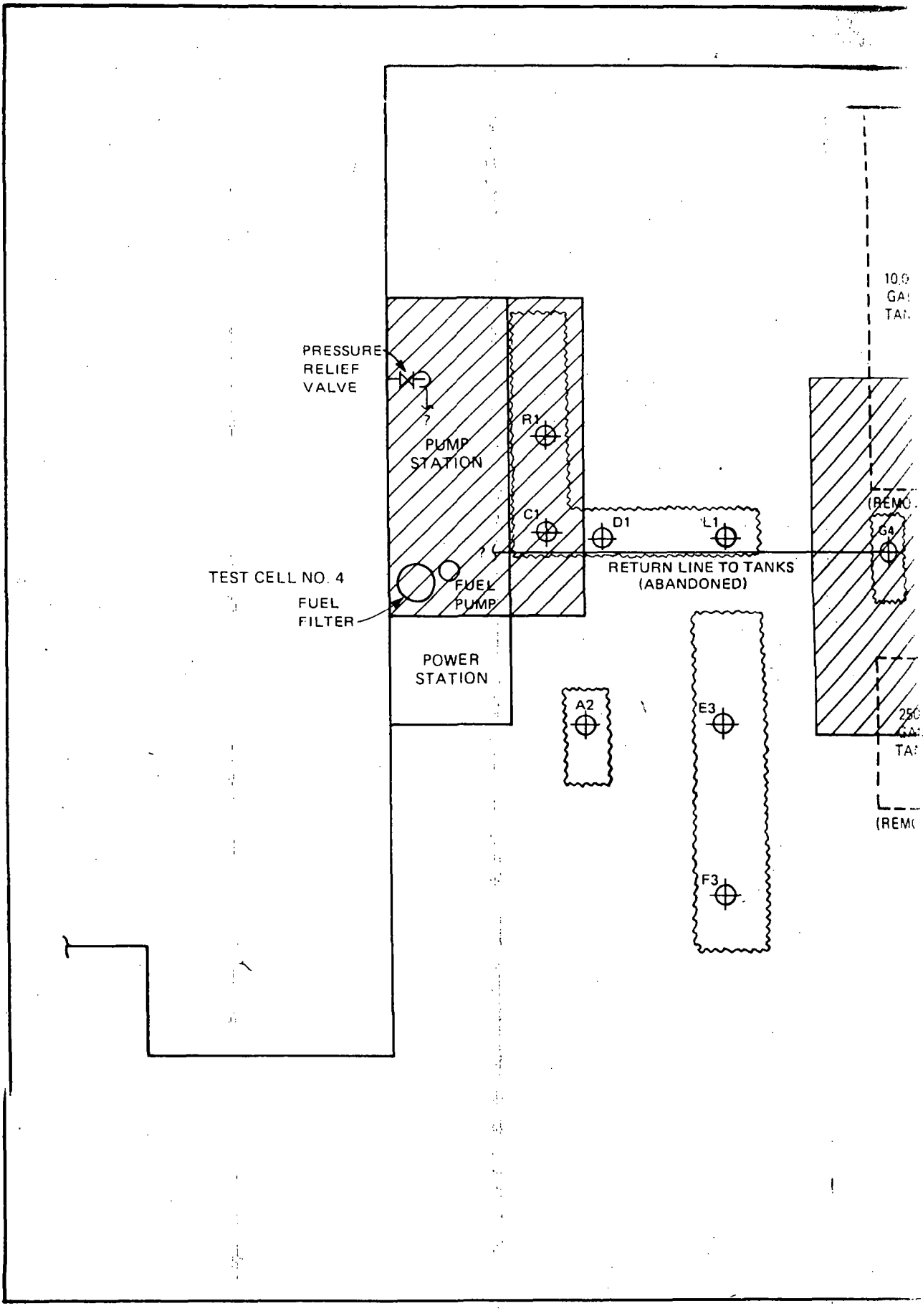
Kennedy/Jenks Engineers

Pacific Airmotive Corporation
Burbank, California

Site Plan Locating Soil Samples and Proposed Excavation

K/J 4101
December 1984

Figure 1


PRESSURE
RELIEF
VALVE
PUMP
STATION
R1
C1
D1
L1
G4
RETURN LINE TO TANKS
(ABANDONED)
TEST CELL NO. 4
FUEL
FILTER
FUEL
PUMP
POWER
STATION
A2
E3
F3

Soil samples collected from excavated material at the above-specified depths were placed in glass jars and sealed with teflon sheets and caps; the caps were then sealed with plastic tape. The samples were labeled and placed in an ice chest for transport to the Kennedy/Jenks Engineers Laboratory Division with complete chain of custody forms. One sample of jet fuel from the PAC fuel supply system was also collected for analysis.

Soil samples were analyzed by a gas chromotography (GC) scan with a flame ionization detector (FID) using the jet fuel sample from the PAC fuel supply system as a standard. Hydrocarbon detection limits of 1 ppm (mg/kg) were achievable using this method.

Phase I Results

The results of the organic vapor field survey are summarized in Table 1. The organic vapor field analyses indicate two areas where organic compounds are present at elevated concentrations in soil at the PAC site. Table 1 also lists results of laboratory analyses of corresponding soil samples. A comparison of gas chromatography scans on soils from these two areas with jet fuel samples obtained from the PAC supply system confirm the presence of jet fuel in these soils. Complete laboratory reports are submitted in Attachment A.

Table 1 also shows a good correlation between the field soil vapor survey using the OVA-128 and quantitative laboratory analysis of soil samples for jet fuel. This agreement between vapor analysis and laboratory analysis supports use of the organic vapor survey technique for defining the extent of jet fuel migration at this site.

One of the confirmed areas with fuel in soil is located adjacent to the foundation slab of the pump station (locations C1 and D1 on Figure 1). Visual inspection of soil under the foundation edge during excavation also indicated possible jet fuel. The site soil is sandy, and due to problems with caving, the maximum depth attempted in this area was nine feet. Based on the organic vapor field survey and results of laboratory soil analysis, the deepest penetration of jet fuel appears to be centered near location C1 (see Figure 1 and Table 1).

TABLE 1

RESULTS OF ORGANIC VAPOR FIELD SURVEY AND
LABORATORY ANALYSIS FOR JET FUEL IN SOIL SAMPLES
PACIFIC AIRMOTIVE CORPORATION, BURBANK, CA (K/J 4101)

Sample Location[1]	Sample Depth Below Ground Surface (feet)	Organic Headspace Vapor Concentration[2] (ppm)	Jet Fuel Concentration in Soil[3] (mg/Kg)
C1	3.5	220	9,300
	6.1	200	NA
	9.2	400	21,000
D1	3.3	4.8	NA
	6.1	550	40,000
	9.0	3.4	<1
L1	3.3	2.6	1
	6.0	8.6	<1
	9.0	3.4	<1
R1	3.5	2.2	250
	6.0	6.2	NA
	9.0	6.2	<1
A2	3.5	1.9	NA
	6.0	2.2	2
E3	5.3	2.9	<1
F3	2.8	2.0	NA
G4	3.0	3.2	<1
	5.3	220	NA
	6.7	>1,000	17,000
	9.1	>1,000	18,000
	12.5	900	10,000

[1]See Figure 1 for sample locations.
[2]Soil samples were placed in glass containers and headspace vapors were analyzed with a Foxboro OVA-128. Background vapor concentration varied between 2 and 6 ppm. Organic vapor concentrations are parts per million (ppm) by volume as methane.
[3]Analysis by gas chromatography scan using flame ionization detection (GC/FID).

NA = Not Analyzed

The second confirmed area with fuel in soil was location G4 at an initial depth of 5.3 feet. Fuel at this location appears associated with an abandoned, buried pipeline from a pressure relief valve. Laboratory analyses of field samples confirm the presence of jet fuel in soil samples collected at location G4 between depths of 5.3 to 12 feet. The 12-foot depth was the maximum depth attained during trench excavation at location G4.

EMERGENCY SPILL CLEANUP - PROPOSED WORK PLAN

In order to prevent the further spread of jet fuel into clean soil, Pacific Air Motive Corporation has decided to excavate soil where jet fuel was found during Phase I (the pump station and location G4) as quickly as possible. The existing pump station is being relocated and the foundation slab will be removed. The soils excavation contractor hired by PAC will then remove material indicated to contain jet fuel by organic vapor field measurements conducted with the OVA-128 by Kennedy/Jenks Engineers. Soil samples will also be collected from excavation pit sidewalls and bottom for laboratory analysis. These samples will document either depths with elevated fuel concentrations or depths at which no significant fuel penetration is suspected based on field vapor analysis.

Task 1 - Excavation of Soil Beneath the Pump Station and Location G4

A soils excavation contractor experienced in the excavation and handling of contaminated soil will be selected by PAC to perform the required excavations. The general locations of planned excavation are shown on Figure 1; actual locations will depend on field conditions and extent of jet fuel migration detected. It is anticipated that the maximum depth of excavation will be approximately 20 feet; however, this depth will depend on shoring and bracing requirements determined by the excavation contractor.

25 (telecon) Neil Lerner 12/21/84 DAB

Excavated soil found to contain jet fuel will be removed from the site in trucks registered for transportation of contaminated materials in accordance with DHS, DOT, and other applicable regulations. This material will be disposed of at a Class I disposal site by the excavation contractor. Non-contaminated,

excavated soil will be temporarily stockpiled on-site for potential use as backfill.

Task 2 - Soil Sample Organic Vapor Survey

Soil samples will be surveyed in the field by Kennedy/Jenks Engineers' personnel using an organic vapor analyzer to indicate the presence of jet fuel. This will be performed by placing the samples in glass jars and analyzing headspace for the presence of organic vapors. Samples will be collected for organic vapor surveys as needed to aid in identifying limits of contamination as was done in Phase I. These samples will include locations at pit sidewalls and bottom, as well as excavated material.

Task 3 - Laboratory Analysis of Soil Samples

For budgetary purposes, we have assumed a total of 30 soil samples will be chemically analyzed in the laboratory. The laboratory results will be used to correlate with the results of the organic vapor field survey. It is anticipated that 15 samples from each area will be sufficient to support organic vapor field measurements.

Soil samples collected from excavated material deposited alongside excavation pits will be placed in glass jars and sealed with teflon sheets and caps; the caps will then be sealed with plastic tape. The samples will be labeled and placed in an ice chest for transport to the Kennedy/Jenks Engineers laboratory. Kennedy/Jenks Engineers personnel will complete chain of custody forms. One sample of jet fuel from the PAC fuel supply system will also be collected for analysis.

Soil samples will be analyzed by gas chromatography (GC) with flame ionization detection (FID) using a jet fuel sample from the PAC storage tank as a standard. Hydrocarbon detection limits of 1 ppm (mg/Kg) should be achievable using this method. Soils samples will be analyzed within a normal 10-working day turnaround period.

Task 4 - Engineering Analysis and Preparation of Cleanup Report

Upon completion of Tasks 1 through 3, Kennedy/Jenks Engineers will prepare a letter report summarizing field procedures and

the results of the field organic vapor measurements and laboratory analyses. The report will include: a site map showing the location of excavated soil, results of organic vapor field surveys, and laboratory analysis reports. The report will present data interpretations and conclusions regarding the horizontal and vertical extent of jet fuel migration found and removed during soil excavation. Recommendations regarding the need for and scope of subsequent investigations and actions will be presented. A representative of Kennedy/Jenks Engineers will be available to attend a meeting to discuss the cleanup report with PAC and interested regulatory agencies.

SCHEDULE

According to PAC, issuance of requests for bids for soil excavation is scheduled for the week of 17 December 1984. We suggest that the results of the preliminary contamination assessment and this plan be submitted to the Regional Water Quality Control Board staff as they have requested.

If you have any questions, please contact us.

Very truly yours,

KENNEDY/JENKS ENGINEERS, INC.

Noel Lerner

Noel M. Lerner
Project Engineer

Thomas W. Kalinowski

Thomas W. Kalinowski, Sc.D.
Project Manager

NML/TWK:ck
Attachments

Attachment to Kennedy/Jenks Engineers'
letter report to
Pacific Airmotive Corporation
dated 11 December 1984

ATTACHMENT A

KENNEDY/JENKS ENGINEERS LABORATORY DIVISION

LABORATORY REPORTS

Soil Analysis Report

Kennedy/Jenks Engineers
Laboratory Division
657 Howard Street
San Francisco, California 94105
415-362-6065

Received 11/21/84
Reported 12/3/84

For Kennedy/Jenks Engineers
Attention Noel M. Lerner
Address 657 Howard Street
San Francisco, CA 94105

(K/J 4101) Page 1 of 7

Lab. No.	843685	843689
Source	Cl	Cl
Pacific Airmotive Corp. Burbank, CA	3.5 ft	9.2 ft
Date Collected	11/19/84	11/19/84
Time Collected	1130	1215
Collected by	Kennedy/Jenks Engineers	

Analysis (1)	Units	Analytical Results	
Jet Fuel	mg/Kg	9,300	21,000

Comments:

(1) Analysis of extract by gas chromatography, using flame ionization detection. Results reported in milligrams per kilogram, wet weight (as received) basis.

Analyst JW, GB Manager Everett R. Smith

Soil Analysis Report

Kennedy/Jenks Engineers
Laboratory Division
657 Howard Street
San Francisco, California 94105
415-362-6065

Received 11/21/84
Reported 12/3/84

For Kennedy/Jenks Engineers
Attention Noel M. Lerner
Address 657 Howard Street
San Francisco, CA 94105

Lab. No.	843692	843694
Source	D1	D1
Pacific Airmotive Corp. Burbank, CA	6.1 ft	9.0 ft
Date Collected	11/19/84	11/19/84
Time Collected	1415	1438
Collected by	Kennedy/Jenks Engineers	

Analysis (1)	Units	Analytical Results	
Jet Fuel	mg/Kg	40,000	<1

Comments:

(1) Analysis of extract by gas chromatography, using flame ionization detection. Results reported in milligrams per kilogram, wet weight (as received) basis.

Analyst JW, GB Manager Everett R. Smith

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Soil Analysis Report

Kennedy/Jenks Engineers
Laboratory Division
657 Howard Street
San Francisco, California 94105
415-362-6065

Received 11/21/84
Reported 12/3/84

For Kennedy/Jenks Engineers
Attention Noel M. Lerner
Address 657 Howard Street
San Francisco, CA 94105

Lab. No.	843691	843693	843695
Source	L1	L1	L1
Pacific Airmotive Corp. Burbank, CA	3.25 ft	6.0 ft	9.0 ft
Date Collected	11/19/84	11/19/84	11/19/84
Time Collected	1420	1430	1440
Collected by	Kennedy/Jenks Engineers		

Analysis (1)	Units	Analytical Results		
Jet Fuel	mg/Kg	1	<1	<1

Comments:

(1) Analysis of extract by gas chromatography, using flame ionization detection. Results reported in milligrams per kilogram, wet weight (as received) basis.

Analyst JW, GB Manager Everett R. Smith

Soil Analysis Report

Kennedy/Jenks Engineers
Laboratory Division
657 Howard Street
San Francisco, California 94105
415-362-6065

Received 11/21/84
Reported 12/3/84

For Kennedy/Jenks Engineers
Attention Noel M. Lerner
Address 657 Howard Street
San Francisco, CA 94105

Lab. No.	843684	843688
Source	Rl	Rl
Pacific Airmotive Corp. Burbank, CA	3.5 ft	9.0 ft
Date Collected	11/19/84	11/19/84
Time Collected	1130	1220
Collected by	Kennedy/Jenks Engineers	

Analysis (1)	Units	Analytical Results	
Jet Fuel	mg/Kg	250	<1

Comments:

(1) Analysis of extract by gas chromatography, using flame ionization detection. Results reported in milligrams per kilogram, wet weight (as received) basis.

Analyst JW, GB Manager Everett R. Smith

Soil Analysis Report

Kennedy/Jenks Engineers
Laboratory Division
657 Howard Street
San Francisco, California 94105
415-362-6065

Received 11/21/84
Reported 12/3/84

For Kennedy/Jenks Engineers
Attention Noel M. Lerner
Address 657 Howard Street
San Francisco, CA 94105

Lab. No.	843697
Source Pacific Airmotive Corp. Burbank, CA	A2 6.0 ft
Date Collected	11/19/84
Time Collected	1540
Collected by	Kennedy/Jenks Engineers

Analysis (1)	Units	Analytical Results
Jet Fuel	mg/Kg	2

Comments:

(1) Analysis of extract by gas chromatography, using flame ionization detection. Results reported in milligrams per kilogram, wet weight (as received) basis.

Analyst JW, GB Manager Everett R. Smith

Soil Analysis Report

Kennedy/Jenks Engineers
Laboratory Division
657 Howard Street
San Francisco, California 94105
415-362-6065

Received 11/21/84
Reported 12/3/84

For Kennedy/Jenks Engineers
Attention Noel M. Lerner
Address 657 Howard Street
San Francisco, CA 94105

Lab. No.	843698
Source Pacific Airmotive Corp. Burbank, CA	E3 5.3 ft
Date Collected	11/20/84
Time Collected	0850
Collected by	Kennedy/Jenks Engineers

Analysis (1)	Units	Analytical Results
Jet Fuel	mg/Kg	<1

Comments:

(1) Analysis of extract by gas chromatography, using flame ionization detection. Results reported in milligrams per kilogram, wet weight (as received) basis.

Analyst JW, GB Manager Everett R. Smith

Soil Analysis Report

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Laboratory Division
657 Howard Street
San Francisco, California 94105
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Received 11/21/84
Reported 12/3/84

For Kennedy/Jenks Engineers
Attention Noel M. Lerner
Address 657 Howard Street
San Francisco, CA 94105

Lab. No.	843701	843702	843703	843704
Source	G4	G4	G4	G4
Pacific Airmotive Corp. Burbank, CA	3.0 ft	6.7 ft	9.1 ft	12.5 ft
Date Collected	11/20/84	11/20/84	11/20/84	11/20/84
Time Collected	1215	1232	1248	1312
Collected by	Kennedy/Jenks Engineers			

Analysis (1)	Units	Analytical Results			
Jet Fuel	mg/Kg	<1	17,000	18,000	10,000

Comments:

(1) Analysis of extract by gas chromatography, using flame ionization detection. Results reported in milligrams per kilogram, wet weight (as received) basis.

Analyst JW, GB Manager Everett R. Smith